**Height** "Z" is the total height of the column from the top of the drilled shaft. See quantities note on sheet 4 of 5.

See roadway plans for the height of the truss above the finished grade.

- Electrical system conduit: Use 6" minimum radius sweeps for bends. No 90 degree elbows are permitted. Install pull tape in empty conduit. Pull tape must have 2750 lbs. minimum tensile strength, and foot length markings. Conduit must extend 6" beyond the concrete as shown, and must be threaded and capped. This conduit may be cut to exact dimension shown on the TMS or other electrical system detail sheet when installed.

- Type DS fill must conform to Item 423, "Reinforcing Bar dimensions shown are out-to-out of bar."

Contractor is responsible for verifying all dimensions and quantities in the field before beginning work.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions shown are out-to-out of bar.

**MISSION THEME OVERHEAD SIGN COLUMN**

OVERHEAD SIGN BRIDGE SPANS UP TO 155 FEET

**SHEET 1 OF 5**

Texas Department of Transportation
San Antonio District (Structural Design)

**ORIGINAL DRAWING DATE: January 2020**

**FILENAME:** Mission Theme OSB.dgn
**LAMINATED ELASTOMERIC BEARING DETAILS**

- Place 0.105" thick steel laminates parallel to the bottom surface of the pad.
- Six 0.105" thick layers 50 Durometer elastomer.
- The use of styrene is not allowed.

**ANCHOR BOLT DETAIL**

- Six total required per column (2 top, 4 bottom).
- Snug tighten all anchor bolt nuts.

---

**LOWER TRUSS ATTACHMENT DETAIL PLAN**

- Bearing plate 9" x 11" x 1"
- Bearing recess
- Chord angle
- Top of concrete column (50 Durometer)
- Elastomer pad
- 2" clear (Typ all sides)
- 8" long x 10" wide

---

**UPPER TRUSS ATTACHMENT DETAIL ELEVATION**

- L 6" x 6" x 6" Center on bearing angle
- L 6" x 6" x 6" Bearing recess
- 2" thickness
- L 6" x 6" x 6" Bearing angle
- L 6" x 6" x 6" Bearing recess
- 2" clear Outside of chord angle
- L 6" x 6" x 6" Bearing angle
- L 6" x 6" x 6" Bearing recess
- 2" clear Outside of chord angle

---

**ANCHOR BOLT DETAIL**

- 1" Dia anchor bolt A193-B7
- With two heavy hex nuts and two galvanized washers

---

**SECTION A**

- Upper truss attachment.
- Bearing pad recess
- 1'-6" x 6" x 6"
- 2'-2" x 6" x 6"
- 3'-2" x 6" x 6"

---

**SECTION B**

- Lower truss attachment.
- Bearing pad recess
- 1'-6" x 6" x 6"
- 2'-2" x 6" x 6"
- 3'-2" x 6" x 6"
GENERAL NOTES:


2. Provide Class C concrete (f’c = 3600 psi).

3. Provide Grade 60 reinforcing steel.

4. Chamfer all exposed edges 1/2" unless noted otherwise.

5. Unless otherwise noted, all concrete surfaces must be smooth and finished with the following paints or approved equivalent.

6. BASE COLOR: SHERMAN WILLIAMS 6142 "MACADAMIA"

7. OSB must be paid under Item 650 “OVERHEAD SIGN SUPPORTS” or as shown in the plans.

8. All connection bolts must conform to Item 447 “Structural Bolting”.

9. All structural steel connection bolts, nuts, rods and washers must be galvanized in accordance with Item 455, “Galvanizing”.

10. Details called for herein are applicable for Design Wind Heights up to 35' structure. Design wind speed 100 mph.


13. Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions shown are out-to-out of bar.

14. Quantities shown are for Contractor information only. Footing quantity includes riprap.

15. Quantities are based on a total height “Z” of 30’-0”.

16. For each 1’-0” variation in “Z”, adjust as follows:

<table>
<thead>
<tr>
<th>BARS</th>
<th>LENGTH</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1’-0”</td>
<td>112 lbs</td>
</tr>
<tr>
<td>B</td>
<td>1’-0”</td>
<td>59 lbs</td>
</tr>
<tr>
<td>S</td>
<td>COUNT</td>
<td>32 lbs</td>
</tr>
</tbody>
</table>

17. CLASS C CONCRETE (FOOTING) 64 CY

18. CLASS C CONCRETE (COLUMN) 29 CY

19. CLASS C CONCRETE (FOOTING) 9.9 CY

TABLE OF ESTIMATED QUANTITIES FOR ONE COLUMN "Z" = 30 FT

<table>
<thead>
<tr>
<th>BAR</th>
<th>NO.</th>
<th>SIZE</th>
<th>LENGTH</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>21</td>
<td>#11</td>
<td>24’-6&quot;</td>
<td>2734</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>#11</td>
<td>18’-0&quot;</td>
<td>1377</td>
</tr>
<tr>
<td>C</td>
<td>7</td>
<td>#4</td>
<td>12’-0&quot;</td>
<td>57</td>
</tr>
<tr>
<td>D</td>
<td>12</td>
<td>#11</td>
<td>10’-10&quot;</td>
<td>692</td>
</tr>
<tr>
<td>E</td>
<td>24</td>
<td>#5</td>
<td>17’-0&quot;</td>
<td>436</td>
</tr>
<tr>
<td>F</td>
<td>6</td>
<td>#6</td>
<td>10’-10&quot;</td>
<td>98</td>
</tr>
<tr>
<td>G</td>
<td>26</td>
<td>#11</td>
<td>19’-3&quot;</td>
<td>2107</td>
</tr>
<tr>
<td>S</td>
<td>40</td>
<td>#5</td>
<td>19’-3&quot;</td>
<td>640</td>
</tr>
</tbody>
</table>

Quantities shown are for Contractor information only. Footing quantity includes riprap.

Contractor is responsible for verifying all dimensions and quantities in the field before beginning work.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions shown are out-to-out of bar.

SAN ANTONIO DISTRICT STANDARD SHEET 4 OF 5

MISSION THEME
OVERHEAD SIGN COLUMN
OVERHEAD SIGN BRIDGE
SPANS UP TO 155 FEET

FEDERAL AID PROJECT NO.
COUNTY
DIST
ROUTE
DN
FED.RD.
DIV.NO.
REVISIONS:
C
0000
000
000
000
000
00
000
00 
COUNTY
00 SAT
TRUSS DETAILS

Maximum span

- 162' (50m)

W X D = Width X Depth

Chord:

- 155' 6" x 5' 11" (4.7 x 1.8m)

Dead load diagonal:

- 15'-0" x 5'-0" (4.5 x 1.5m)

Wind load diagonal:

- 14'-0" x 5'-0" (4.3 x 1.5m)

Dead load vertical:

- 13'-0" x 5'-0" (4.0 x 1.5m)

Wind load strut:

- 16'-9" x 5'-0" (5.1 x 1.5m)

Truss dead load:

- 162 lb/ft (10.0 kN/m)

Size of HS bolts in splice connection: 1" diameter

Number of high strength (HS) bolts required in truss connection or splice are indicated with brackets [ ] after the member size.

- Low-Alloy Steel for non-bridge structures per Item 442, Metal For Structures
- Carbon Steel for non-bridge structures per Item 442, Metal For Structures

All truss members are angles.

See Standard Sheet OSBC for truss details not shown here.

PLAN

See Standard Sheet OSBC for truss details not shown here.

ELEVATION

See Standard Sheet OSBC for truss details not shown here.

Dead load diagonal

Wind load diagonal

Chord

Dead load vertical

Wind load strut

TRUSS DETAILS

See Standard Sheet OSBC for truss details not shown here.

TRUSS DETAILS

See Standard Sheet OSBC for truss details not shown here.